DOCUMENT RESUME

ED 081 568 RC 007 280

AUTHOR Kleinfeld, Judith
TITLE Using Nonverbal Warmth to Increase Learning: A Cross-Cultural Experiment. ISEGR Research Note.
INSTITUTION Alaska Univ., Fairbanks. Inst. of Social, Economic, and Government Research.
PUB DATE Jun 73
NOTE 13p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Body Language; *Cross Cultural Studies; *Eskimos; Grade 9; Interviews; *Learning; *Nonverbal Communication; *Urban Youth; Verbal Communication

ABSTRACT

The purposes of this cross-cultural experiment were to: (1) observe whether nonverbal teacher warmth increases the learning and verbal communication of Eskimo students, and (2) determine if Eskimos are more sensitive than whites to teacher warmth. Twenty village Eskimo students and 20 urban white students from the ninth grade, equally divided by sex, attended 2 college guidance and information sessions. The instructor (a 26-year-old white female) behaved in a warm style in one and in a neutral, impersonal style in the other. Three measures which determined differences in verbal expression and learning in the situations were question-answering, question-asking, and learning. The number of words in the student's reply to 4 questions about a class served as the question-answering measure; the number of questions the student asked about information given to him on 2 unfamiliar colleges served as the question-asking measure; and the student's verbal responses to 8 questions measuring information acquisition served as the learning measure. Among the findings were: both Eskimo and white students tended to learn significantly more in a nonverbally warm situation, with Eskimo females showing the greatest increase. All groups had about the same scores when the warm treatment was used first. (NQ)

FILMED FROM BEST AVAILABLE COPY

ED 081568

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ISEGR RESEARCH NOTE

June 1973

RECEIVED
OCT 18 1973
NMSU
E.R.I.C.

Using Nonverbal Warmth to Increase Learning: A Cross-Cultural Experiment

JUDITH KLEINFELD

INSTITUTE OF SOCIAL, ECONOMIC
AND GOVERNMENT RESEARCH

UNIVERSITY OF ALASKA
Fairbanks, Alaska

RC 007280

Institute *Research Notes* are informal presentations of research data by institute staff or associates. The *Research Notes* format allows authors to present findings that may be of interest to scholars, industries, agencies, communities, or other groups in Alaska.

Judith Kleinfeld is an assistant professor of educational psychology at the Institute of Social, Economic and Government Research. She holds an Ed.D. in educational psychology from the Harvard Graduate School of Education. Before joining the institute, she taught Indian and Eskimo students at the Alaska Native Medical Center in Anchorage. Her recent work focuses on the psychological characteristics of persons who are effective in cross-cultural relationships.

This research, supported by the Alaska Department of Education as part of a program to improve secondary school education in Alaska, was done through the Center for Northern Educational Research and the Institute of Social, Economic and Government Research at the University of Alaska.

The author wishes to express appreciation to the Fairbanks Native Association for supporting the study and to the Fairbanks North Star Borough School District for its cooperation.

Victor Fischer, Director of the Institute

Peggy Raybeck, Staff Writer

USING NONVERBAL WARMTH TO INCREASE LEARNING:
A CROSS-CULTURAL EXPERIMENT

An educational problem of great concern to teachers is Eskimo students' frequent withdrawal into silence in the classroom. These students often will not answer a teacher's questions or ask questions themselves. This is especially evident in integrated classrooms, where Eskimo students often huddle together in the far corner of the room. Withdrawn from the class, they tend to learn little.

The major purpose of this study was to test through a careful experiment a hypothesis suggested by extensive classroom observation of effective teachers of Eskimo and Indian students: *Nonverbal teacher warmth increases the learning and verbal communication of Eskimo students.* Behaving in a very warm, personal style appears to increase the Eskimo student's intellectual performance by reducing his anxiety in the classroom—reducing his fear of making embarrassing errors that will lead to disapproval from his teacher and ridicule from his classmates.

A secondary purpose of this study was to determine if Eskimo students are more sensitive than white students to the effects of teacher warmth. Coming from small villages where close interpersonal relations are prevalent, Eskimo students frequently become disturbed and anxious when exposed to the kind of impersonal teaching that white students take for granted.

Nonverbal Communication of Warmth

While there are many ways in which different teachers communicate personal warmth, the use of nonverbal cues appears to be especially successful in a cross-cultural classroom. First, Eskimo students seem to be especially sensitive to nonverbal messages (Zintz, 1963; Currie, 1970). They rely more on nonverbal cues to send information about how they are feeling and to receive information about how others feel toward them. For

This paper is based on a more technical article which will appear in the *Journal of Social Psychology*, 1973.

example, Eskimo students who have participated in the Boarding Home Program in Alaska urban communities suggest that boarding home parents look at a student's posture, voice tone, and walk to see if something is troubling him rather than ask direct questions.

Second, especially in an integrated classroom, teachers who obviously behave with great personal warmth to Eskimo students by singling them out for special treatment may not only embarrass them but also may arouse the resentment of other students in the class, who suspect the teacher of playing favorites. To even up the score, the resentful white students may ridicule Eskimo students, for example, by calling them names or making fun of their speech. This creates a hostile classroom climate which inhibits Eskimo students' verbalness and learning despite the warm behavior of the teacher. Teachers who use nonverbal cues to express warmth toward Eskimo students are less likely to create a hostile classroom climate because urban white students rarely see such subtle communications as indicators of favoritism.

There are two ways to express nonverbal warmth frequently used by effective teachers—smiling and close body distance. Some teachers also use a third cue—touch. Its success, however, depends on other factors such as both the sex of the teacher and student and whether the teacher is at ease with this mode of expression.

Smiling, touch, and close body distance are especially salient cues of warmth in Eskimo culture (Briggs, 1970; Stefannson, 1913) and connote warmth among whites as well. At least among members of Western culture, smiling has been found to be the most important behavior people use to judge others' personal warmth (Bayes, 1970). Yet, it is remarkable how infrequently many teachers smile in their classrooms. Moreover, teachers seem least likely to smile in those classroom situations where smiling is most important, such as when the teacher places an Eskimo student under stress by asking him a question in front of the class. The problem in this situation is that the teacher as well as the student becomes anxious. The teacher fears an embarrassing silence and his face often becomes tense and tight. Unaware of the basis for the teacher's anxiety, the Eskimo student may interpret the teacher's tense facial expression as hostility or disapproval. Those teachers who maintain a relaxed, expectant smile in this situation are most likely to enable students to respond.

Teachers can also express warmth effectively by moving physically close to students when they instruct, especially when they ask questions. The spatial distance one places one's self from another person is often a sign of the emotional distance in the relationship (Hall, 1969). When Eskimo students typically seat themselves in the far corner of an integrated classroom—the maximum distance from the teacher—the message is obvious. Many teachers instruct while standing several feet from the first row in the classroom, a distance which signifies formal, impersonal relationships (Hall, 1969). More effective teachers instruct while moving within a personal distance of the students, a

distance which communicates warmth. They move close to the Eskimo student when asking a question or sit on a desk in the middle of the students when teaching.

Touching is another way that teachers may communicate warmth effectively. These teachers, for example, drape an arm around a student's chair while explaining a concept. With male students, male teachers may use a playful punch to express affection. Because of Western middle class taboos about touching, however, not all teachers feel comfortable using this means to express warmth and therefore cannot use it successfully. Teachers who are anxious about touching communicate anxiety, not warmth, if they force themselves to touch students. In addition, male teachers must be quite cautious about using touch with female students. Given the history of sexual exploitation of Native females as well as the concern about sexuality typical of adolescents, students could misinterpret the teacher's behavior. In short, while touching may be a powerful means of expressing warmth, it should only be used where the teacher is comfortable with this style and where there is no possibility of sexual misunderstandings.

Other Research on Effects of Warmth

A number of studies have found that teacher warmth increases intellectual performance among white students. Examples are alertness in class (Ryans, 1960), work in class (Cogan, 1958), intelligence test scores (Exner, 1966; Gordon and Durea, 1948), and academic achievement (McKeachie and Lin, 1969). Some studies have found that teacher warmth also increases verbalness (Pope and Siegman, 1968; Reece and Whitman, 1962), although other studies have not found this result (Williams, 1970; Heller, Davis, and Myers, 1966).

The effects of warmth on Eskimo students, however, has not received much attention. One study (Kleinfeld, 1973a) found that a warm classroom climate was related to greater verbal participation in classroom discussions for Eskimo and Indian students. Another study (Kleinfeld, 1973b) found that instructor warmth led to higher intelligence test scores among Eskimo and Indian students. The effects of warmth on Eskimo students' learning, however, has not been examined. Nor have comparisons been made to determine if warmth affects Eskimo and white students differently.

Experimental Study

Since classroom observation is obviously subject to error, it was important to use an experiment to test the effects of nonverbal warmth on learning. However, because excessive research on Natives in the past has produced little of direct benefit to them and some negative effects, Native groups are cautious about supporting any type of research.

This study, designed to avoid the typical negative effects, may demonstrate that useful research can be done with the support of Native groups.

Before contacting the Fairbanks North Star Borough School District, the author presented this study to the Fairbanks Native Association's Boarding Home Program and Education committees. She explained that students participating in the study would not feel like guinea pigs because the experiment was designed so that students would not realize they were participating in a study. The experimental situation would be introduced as "college guidance and information sessions," a part of the school's counseling program. An unobtrusive experimental situation was also desirable from a research perspective since it avoided special effects caused by knowing that one is participating in an experiment.

The author further explained that the study was designed to benefit not only teachers and students in the future but also the students actually involved. Even though it would be an experimental situation, material would be presented in the "college guidance and information sessions" that would help the students learn about and choose colleges.

Participants

Twenty village Eskimo students and 20 urban white students, equally divided by sex, were randomly selected from the ninth grade. The Eskimo students came from several different villages and were attending an urban high school through the Boarding Home Program.

Method

Each student attended two college guidance and information sessions. In one session, the instructor (a 26-year-old white female unknown to the students) behaved in a warm style. In the other session, the same instructor behaved in a neutral, impersonal style. In the warm session, the instructor sat at a distance of 30 inches, which is defined as a personal distance that generates a kinesthetic sense of closeness (Hall, 1969). She smiled frequently and touched the student twice while showing him a map locating the colleges. In the neutral session, the teacher stood at an impersonal distance of 80 inches and did not smile or touch the student.

The following three measures were used to determine if there was a significant difference in the extent of student verbal expression and learning in the warm and impersonal situations.

Question-answering. First, the instructor asked the student four questions about one of his classes, apparently to learn about the student's preferences in order to provide college counseling (e.g., "What do you like best about your English/Math class?"). The number of words in the student's replies served as the measure of question-answering. This was the least sensitive measure since it came at the beginning and the warmth variable had had little time to take effect.

Question-asking. Then, the instructor presented information about two unfamiliar colleges, previously mentioning that the student would be asked questions about the colleges to see what he had learned. The student was asked if he had any questions about the colleges. The number of questions the student asked served as the measure of question-asking.

Learning. The student's verbal responses to eight questions measuring acquisition of information about the colleges constituted the learning measure. The questions did not call for yes/no responses but rather allowed for a variety of responses, including memory of factual information and drawing of implications.

Students were randomly assigned to a first neutral then warm or a first warm then neutral sequence of sessions. This was done to control for the effects of familiarity so that any increases in learning and verbal participation were not the result of familiarity alone. The content of the sessions was identical except that students were asked about different classes and told about different colleges.

Results

The detailed results of the statistical analysis and a summary of the data are presented in a technical appendix. Here, the general results and their implications will be discussed.

Both Eskimo and white students tended to learn significantly more when the instructor behaved in a nonverbally warm style. Eskimo females showed the greatest increase in this sequence. They received a mean score of 2.6 correct answers when they were first taught in an impersonal style. When the same students were taught in a warm style, they received a mean score of 7.2 correct answers. Their scores were almost *three times* higher.

When warm treatment came first, all groups received about the same scores in both the warm and neutral treatments. When impersonal treatment came first, students' scores were quite low and then became significantly higher under warmth. These results suggest that warmth has carry-over effects. Once an instructor is initially defined as a warm

person, later merely impersonal treatment does not change the student's view and learning remains high.

For both Eskimo and white female students (but not for Eskimo and white male students) warmth led to more verbalness as measured by longer answers to the questions asked about their classes. Possibly this sex difference occurred because male students, aware of the sexuality of a female instructor, became anxious when she asked social questions relating to their feelings about classes. However, in the learning situation, warmth from a female instructor increased male as well as female students' learning.

Warmth led to a significantly higher number of questions asked by Eskimo students in the warm-neutral sequence. However, warmth did not have significant effects on the number of questions asked by white students.

In general, Eskimo and white students responded in about the same way to instructor warmth. Only a few small diffences between Eskimo and white students in the effects of warmth were found. In two cases, Eskimos were more sensitive to warmth and, in one case, whites were more sensitive (see Appendix). This result could have different explanations. First, it may be that Eskimos are no more sensitive than whites to the effects of warmth. Classroom observation may produce the impression that Eskimos are more sensitive because the proportional increase for Eskimos when the teacher is warm is so much greater than for whites. The increase in learning for both Eskimo and white females in the experiment illustrates this point. Eskimo and white females raised their scores about the same number of points when the instructor was warm. However, since Eskimo students originally got only 2.6 questions correct, the increase was almost three times higher. Since white students originally got 8.8 questions correct, the increase was only about one-half higher. In short, the change for whites did not appear as impressive as for Eskimos.

Another explanation is that Eskimo students are more sensitive to warmth than white students, but these differences did not appear because of the particular conditions of this study. Possibly Eskimos require a longer period of time than the study provided to develop sufficient trust in the warmth and good will of the teacher to respond. Many teachers point out that it often takes Eskimo students several weeks to get to the point where they trust the teacher enough to talk in class. Yet, this study only provided about 10 minutes for the student to get to know the teacher. Had the study involved several days or several weeks of instructor warmth, it may be that the effects of warmth on Eskimos would have been much greater.

Conclusion

While the question of whether Eskimos are more or less sensitive to warmth than whites is of scientific interest, the practical teaching implications of this experiment are the same for both groups of students. This study suggests that teachers who use a nonverbally warm instructional style are likely to substantially increase the learning of both Eskimo and white students in their classrooms.

APPENDIX

The scores on learning and question-answering were analyzed by a 2 (ethnic group) x 2 (sequence) x 2 (warm-neutral) repeated measures analysis of variance. Question-answering scores did not evidence homogeneity of variance, and consequently a logarithmic transformation was performed. Since initial analyses on the learning and question-answering measures indicated sex differences, separate analyses were done for males and females on these two measures. Question-asking scores were not normally distributed; hence, the nonparametric Walsh Test was used. Since sex differences on the question-asking measure were not indicated, males and females were combined in the analysis.

Warmth had significant effects on learning among males ($F=13.50$, $p < .01$), although these effects must be understood in light of the interactions between warmth and sequence ($F=9.00$, $p < .01$) and between warmth, sequence, and ethnic group ($F=5.50$, $p < .01$). Among white males, warmth led to significantly higher learning only in the neutral-warm sequence ($t=4.92$, $p < .0005$). In this sequence an interaction between warmth and ethnic group occurred which indicated that white males' scores increased significantly more under warmth than Eskimo males' scores ($F=5.16$, $p < .05$). However, for Eskimo males, warmth led to significantly higher learning across both the neutral-warm and warm-neutral sequences ($F=5.83$, $p < .05$).

Warmth also had significant effects on learning among females ($F=12.57$, $p < .01$), but this result again must be understood in view of the warmth by sequence interaction ($F=15.14$, $p < .05$). Warmth led to significantly higher learning only in the neutral-warm sequence ($t=5.26$, $p < .0005$).

On question-answering, warmth had significant effects only for females where a warmth by sequence interaction occurred ($F=5.33$, $p < .01$). Warmth led to higher scores only in the neutral-warm sequence ($t=1.82$, $p < .05$).

On question-asking, warmth had significant effects for Eskimo males and females in the warm-neutral sequence ($p < .056$). No other significant effects occurred.

TABLE

Means and Standard Deviations of Dependent Variables

Criterion	Teaching Session	Treatment Groups							
		Eskimo Warm/Neutral		Eskimo Neutral/Warm		White Warm/Neutral		White Neutral/Warm	
		M	SD	M	SD	M	SD	M	SD
Males									
Informational learning	Warm	6.20	1.94	5.40	2.87	10.00	4.43	12.00	3.16
(Correct responses)	Neutral	5.20	2.23	3.80	1.60	10.40	3.26	7.60	4.41
Question-asking	Warm	.80	.40	0.00	0.00	.20	.40	.60	.80
(Number of questions)	Neutral	.40	.49	.20	.40	.20	.40	.40	.80
Question-answering	Warm	22.20	7.41	21.20	12.34	40.60	23.08	34.20	18.24
(Number of words)	Neutral	21.40	3.77	23.80	11.62	22.60	23.28	34.60	10.97
Females									
Informational learning	Warm	5.40	2.50	7.20	4.71	9.40	4.03	13.00	3.63
(Correct responses)	Neutral	6.00	1.41	2.60	2.58	9.20	2.48	8.80	2.04
Question-asking	Warm	1.40	1.36	0.00	0.00	0.00	0.00	.80	.75
(Number of questions)	Neutral	.40	.49	.40	.49	.20	.40	.20	.40
Question-answering	Warm	19.40	7.71	29.40	19.21	28.40	15.90	58.00	24.36
(Number of words)	Neutral	20.80	3.43	22.80	16.53	62.80	49.67	33.00	19.21

Warm/Neutral = Warm treatment first. Neutral/Warm = Neutral treatment first.

REFERENCES

BAYES, M.A. An investigation of the behavioral cues of interpersonal warmth. (Doctoral dissertation, University of Miami) Ann Arbor, Michigan: University Microfilms, 1970, No. 70-18, 160.

BRIGGS, J.L. *Never in anger: Portrait of an Eskimo family.* Cambridge: Harvard University Press, 1970.

COGAN, M.L. The behavior of teachers and the productive behavior of their pupils: II. "Traits analysis." *Journal of Experimental Education*, 1958, *27*, 107-124.

CURRIE, W. An interview with Walter Currie. *The Indian News*, December, 1970, 5.

EXNER, J.E. Variations in WISC performance as influenced by differences in pretest rapport. *Journal of General Psychology*, 1966, *74*, 229-306.

GORDON, L.V. and DUREA, M.A. The effect of discouragement on the revised Stanford Binet Scale. *Journal of Genetic Psychology*, 1948, *73*, 201-207.

HALL, E.T. *The Hidden Dimension.* New York: Anchor Books, 1969.

HELLER, K., DAVIS, J.D., and MYERS, R.A. The effects of interview style in a standardized interview. *Journal of Consulting Psychology*, 1966, *30*(6), 501-508.

KLEINFLED, J.S. *Effective Teachers of Indian and Eskimo High School Students.* College, Alaska: Institute of Social, Economic and Government Research, 1972.

KLEINFELD, J.S. Classroom climate and the verbal participation of Indian and Eskimo students in integrated classrooms. *Journal of Educational Research*, 1973a (forthcoming).

KLEINFELD, J.S. Effects of nonverbally communicated personal warmth on the intelligence test performance of Indian and Eskimo adolescents. *Journal of Social Psychology*, 1973b (forthcoming).

MCKEACHIE, W.J. and LIN, Y. Achievement standards, debilitating anxiety, intelligence and college women's achievement. *Psychological Record*, 1969, *19*, 457-459.

POPE, B. and SIEGMAN, A.W. Interviewer warmth in relation to interviewee verbal behavior. *Journal of Consulting and Clinical Psychology*, 1968, *32*,(5), 588-595.

REECE, M.M. and WHITMAN, R.N. Expressive movements, warmth, and verbal reinforcements. *Journal of Abnormal and Social Psychology*, 1962, *64*, 234-236.

RYANS, D.G. Characteristics of Teachers. Washington: American Council on Education, 1960.

STEFANSSON, V. *My life with the Eskimo*. New York: The MacMillan Co., 1913.

WILLIAM, G. Effects of interpersonal atmosphere and sex of interviewer on interview related behavior. (Doctoral dissertation, University of Missouri) Ann Arbor, Michigan: University Microfilms, 1970, No. 70-6650.

ZINTZ, M.V. *Education across cultures*. Dubuque, Iowa: Kendall Hunt, 1963.